

CLAIM SUMMARY DOCUMENT

1. (Currently Amended) A railway locomotive brake control apparatus on a train having at least one ECP equipped car, an ECP equipped lead locomotive and at least one trailing locomotive, each locomotive having a brake valve which controls a brake cylinder valve and a independent application and release valve and each locomotive being pneumatically interconnected via an independent application and release pipe therebetween, said locomotive brake control apparatus comprising:

a brake controller on said lead locomotive for electrically communicating signals indicative of at least brake commands to said at least one ECP equipped car;

said brake controller controlling said brake cylinder valve on said lead locomotive to implement braking effort on said lead locomotive relative to braking effort on said at least one ECP equipped car resulting from said signals; and

said brake controller controlling said independent application and release valve on said lead locomotive to control said brake cylinder valve on said at least one trailing locomotive via said independent application and release pipe to implement braking effort on said at least one trailing locomotive relative to said braking effort on said at least one ECP equipped car.

2. (Currently Amended) A railway locomotive brake control method for a train having at least one ECP equipped car, an ECP equipped lead locomotive and at least one trailing locomotive, each locomotive having a brake valve which controls a brake cylinder valve and a independent application and release valve and each locomotive being pneumatically interconnected via an independent application and release pipe therebetween, said locomotive brake control method comprising:

electrically communicating signals indicative of at least brake commands from said lead locomotive to said at least one ECP equipped car;

controlling said brake cylinder valve on said lead locomotive to implement braking effort on said lead locomotive relative to braking effort on said at least one ECP equipped car resulting from said electrically communicated signals; and

controlling said brake valve said independent application and release valve on said lead locomotive to control said brake cylinder valve on said at least one trailing locomotive via said independent application and release pipe to implement braking effort on said at least one trailing locomotive relative to said braking effort on said at least one ECP equipped car.

10. (Currently Amended) The computer controlled brake system in Figure 1 includes an electropneumatic control unit 20 which is responsive to input signals to control the pressure on brake pipe 21, independent application and release pipe (#20) 22 and the actuating pipe (#13) 23 and the brake cylinders 24 on its locomotive using a valve for each. The independent application and release pipe 22 and the actuating pipe 23 run throughout the locomotive consist and allow independent control of the locomotive brake as distinguished from the control of the pneumatic brakes in each of the car by the brake pipe 21 running throughout the train. Electrical communication and control of the locomotives in the consist is available over the 27-pin mu wire 25. This is generally under the control of the propulsion system (not shown).